

### **ABSTRACT OF THE DISCLOSURE**

In a method and apparatus for determining and documenting, from current x-ray image data, x-ray exposure values employed for producing an x-ray exposure or a sequence of x-ray exposures by irradiation of a radiation detector with x-rays from an x-ray diagnostic source, an exposed image region of the radiation detector is determined, and a region of interest within the exposed image region also is determined. An x-ray image exposure value is determined from the grey scale values of the pixels in the region of interest. The x-ray image exposure value is normalized with respect to a signal value. Measurement values employed for producing the exposed image region are independently measured, and, using these measurement values, the normalized value is converted into a physical unit. The physical unit is stored, associated with the measurement values, for documentation.

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